


IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended) A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

- approximating the object using a figure for each of said frames;
- extracting a plurality of points representing the figure for each of said frames;
- approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, reference position data about one of said plurality of points in each of said frames and relative position data about remaining points in each of said frames, the relative position data referring to the reference position data in the same frame ~~with reference to said one of said plurality of points~~; and
- describing the object region data using the functions.

 Claim 2 (Original) The method according to claim 1, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 3 (Original) The method according to claim 1, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 4 (Original) The method according to claim 1, wherein said relative position data are components of differential vectors between the one of said plurality of points and remaining points.

Claim 5 (Original) The method according to claim 1, wherein said object region data comprises parameters of the functions.

Claim 6 (Currently Amended) A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

approximating the object using a figure for each of said frames;

extracting a plurality of points representing the figure for each of said frames;

approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, reference position data about said plurality of points in a ~~reference~~ predetermined frame and relative position data about said plurality of points in a succeeding frame, the relative position data referring with to the reference position data in the same frame ~~to the position data about said plurality of points in the reference frame~~; and

describing the object region data using the functions.

Claim 7 (Original) The method according to claim 6, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 8 (Original) The method according to claim 6, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 9 (Currently Amended) The method according to claim 6, wherein said relative position data are components of differential vectors between said plurality of points in the predetermined ~~reference~~ frame and said plurality of points in the succeeding frame.

Claim 10 (Original) The method according to claim 6, wherein said object region data comprises parameters of the functions.

Claim 11 (Original) A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

approximating the object using a figure for each of said frames;

extracting a plurality of points representing the figure for each of said frames;

approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

describing the object region data using the functions and depth information of the object.

Claim 12 (Original) The method according to claim 11, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 13 (Original) The method according to claim 11, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 14 (Original) The method according to claim 11, wherein said object region data is described by using the depth information of the object and parameters of the functions.

Claim 15 (Original) The method according to claim 11, wherein said depth information is a relative depth and has a discrete level value.

Claim 16 (Original) A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

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approximating the object using a figure for each of said frames;
extracting a plurality of points representing the figure for each of said frames;
approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

describing the object region data using the functions and display flag information indicating a range of frames in which the object or each of said points is visible or not.

Claim 17 (Original) The method according to claim 16, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 18 (Original) The method according to claim 16, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 19 (Original) The method according to claim 16, wherein said object region data is described by using the display flag information and parameters of the functions.

Claim 20 (Original) A method of describing object region data about an object in video data over a plurality of frames, said method comprising:

approximating the object using a figure for each of said frames;

extracting a plurality of points representing the figure for each of said frames;

approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

describing the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over said plurality of frames.

Claim 21 (Original) The method according to claim 20, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 22 (Original) The method according to claim 20, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 23 (Original) The method according to claim 20, wherein said object region data is described by using the object passing range information and parameters of the functions.

Claim 24 (Original) A method of describing object region data about an object moving in a panorama image formed by combining a plurality of frames with being overlapped, said method comprising:

approximating the object in the panorama image using a figure;

extracting a plurality of points representing the figure in a coordinate system of the panorama image;

approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and


describing the object region data using the functions.

Claim 25 (Original) The method according to claim 24, wherein said object region data comprises information representing a range of frames in which the object exists in the video data and information identifying the figure approximating the object region.

Claim 26 (Original) The method according to claim 24, wherein said object region data comprises one of information representing related information linking to the object and information representing a method of accessing the related information.

Claim 27 (Original) The method according to claim 24, wherein said object region data comprises parameters of the functions.

Claim 28 (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object in video data over a plurality of frames, the computer readable program code means comprising:

 computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about one of said plurality of points and relative position data about remaining points with reference to said one of said plurality of points; and

computer readable program code means for describing the object region data using the functions.

Claim 29 (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object

region data about an object in video data over a plurality of frames, the computer readable program code means comprising:

computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about said plurality of points in a reference frame and relative position data about said plurality of points in a succeeding frame with reference to the position data about said plurality of points in the reference frame; and

computer readable program code means for describing the object region data using the functions.

Claim 30 (Original) An article of manufacture comprising
a computer usable medium having computer readable program code means embodied therein
and for describing object region data about an object in video data over a plurality of frames,
the computer readable program code means comprising:

computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for describing the object region data using the functions and depth information of the object.

Claim 31 (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object in video data over a plurality of frames, the computer readable program code means comprising:

computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for describing the object region data using the functions and display flag information indicating a range of frames in which the object or each of said points is visible or not.


Claim 32 (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object in video data over a plurality of frames, the computer readable program code means comprising:

computer readable program code means for approximating the object using a figure for each of said frames;

computer readable program code means for extracting a plurality of points representing the figure for each of said frames;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for describing the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over said plurality of frames.

 Claim 33 (Original) An article of manufacture comprising a computer usable medium having computer readable program code means embodied therein and for describing object region data about an object moving in a panorama image formed by combining a plurality of frames with being overlapped, the computer readable program code means comprising:

computer readable program code means for approximating the object in the panorama image using a figure;

computer readable program code means for extracting a plurality of points representing the figure in a coordinate system of the panorama image;

computer readable program code means for approximating trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

computer readable program code means for describing the object region data using the functions.

Claim 34 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames ;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about one of said plurality of points and relative position data about remaining points with reference to said one of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions.

Claim 35 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, position data about said plurality of points in a reference frame and relative

position data about said plurality of points in a succeeding frame with reference to the position data about said plurality of points in the reference frame; and

program code portion for causing a computer to describe the object region data using the functions.

Claim 36 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions and depth information of the object.

Claim 37 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;

program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions and display flag information indicating a range of frames in which the object or each of said points is visible or not.

Claim 38 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object in video data over a plurality of frames, the computer data signal comprising:

program code portion for causing a computer to approximate the object using a figure for each of said frames;

program code portion for causing a computer to extract a plurality of points representing the figure for each of said frames;


program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions and object passing range information indicating a range where the figure approximating the object exist over said plurality of frames.

Claim 39 (Original) A computer data signal embodied in a carrier wave, the computer data signal capable of describing object region data about an object moving in a panorama image formed by combining a plurality of frames with being overlapped, the

computer data signal comprising: program code portion for causing a computer to approximate the object in the panorama image using a figure;

program code portion for causing a computer to extract a plurality of points representing the figure in a coordinate system of the panorama image;

 program code portion for causing a computer to approximate trajectories with functions, the trajectories being obtained by arranging, in the frames advancing direction, data indicating positions of said plurality of points; and

program code portion for causing a computer to describe the object region data using the functions.
